

Comments of New Generation Biofuels

Massachusetts Department of Energy Resources

October 15, 2008

New Generation Biofuels appreciates the opportunity afforded by the Massachusetts Department of Energy Resources (“DOER”) to comment on changes to the Massachusetts Renewable Portfolio Standard (“RPS”) in light of statutory changes enacted in the Green Communities Act of 2008. New Generation Biofuels’ comments relate to the eligibility criteria applied to liquid biofuels. As such, these comments apply equally to two questions asked by DOER. For Class I: “What new or modified criteria should be required for any of the specified eligible technologies or fuels?” And, for Class II: “What criteria should be required for any of the specified eligible technologies or fuels?”

I. DESCRIPTION OF NEW GENERATION BIOFUELS

Formed in 2006, New Generation Biofuels has developed a new technology for the manufacture of a biofuel from renewable plant oils and animal fats. New Generation Biofuels’ manufacturing process produces a biofuel with substantially lower life-cycle CO₂ emissions than standard biofuels.

As DOER may be aware, the production and combustion of standard biodiesel produces substantially fewer greenhouse gas emissions and local air pollutants than corn-based ethanol. New Generation Biofuels has created a biofuel even more energy-efficient than biodiesel. Standard biodiesel is produced using a process called transesterification, which is more energy intensive than New Generation Biofuels’ bioemulsion process. New Generation Biofuels’ new manufacturing process produces several benefits over biodiesel. Chief among them are that New Generation Biofuels’ product: 1) yields lower net CO₂ emissions per unit of energy than biodiesel; 2) unlike biodiesel, does not require blending with traditional diesel derived from petroleum; 3) and emits significantly less NO_x.

II. THE MASSACHUSETTS RPS SHOULD PERMIT ALL FEEDSTOCKS THAT ARE CUSTOMARY IN THE PRODUCTION OF BIODIESEL

In enacting the Green Communities Act, the state legislature demonstrated its continued commitment to the use and development of biofuels in Massachusetts. Section 11F(b) of the Green Communities Act states that “a renewable energy generating source” is one that generates electricity from

low emission advanced biomass power conversion technologies using fuels such as wood, by-products or waste from agricultural crops, food or animals, energy crops, biogas, *liquid biofuel including but not limited to biodiesel*, organic refuse-derived fuel, or algae.

In the Green Communities Act, the Legislature defined liquid biofuel as “including but not limited to biodiesel.” This language shows clearly that the Legislature intended biodiesel to be eligible for inclusion in the RPS. And, therefore, if the Department intends to limit the biomass feedstocks that an eligible biofuel may employ, it may not do so in a manner that would exclude the feedstocks that customarily go into the production of biodiesel.¹ It is a basic principle of statutory construction in Massachusetts that words are to be given their ordinary meaning.²

Allowing flexibility among biofuel feedstocks is not only necessary to fulfill the intent of the Legislature, it is also good policy. The biofuels sector is experiencing a period of rapid technological development. High prices for petroleum and certain agricultural commodities are

¹ Those feedstocks are, chiefly, soybean oil as well other virgin and used vegetable oils including those from canola (rape seed), corn, and jatropha.

² *Commonwealth v. Spearin*, 846 N.E.2d 390, 395 (Mass. 2006) (“the general and familiar rule is that a statute must be interpreted according to the intent of the Legislature ascertained from all its words construed by the ordinary and approved usage of the language”); *Tesson v. Comm’r of Dept. of Transitional Assistance*, 671 N.E.2d 977, 980 (Mass. App. Ct. 1996) (“The language of a statute is not to be enlarged or limited by construction unless its object and plain meaning require it.”).

driving biofuels manufacturers to develop more energy efficient production processes and to experiment with a wider array of feedstocks. At this stage in the development of the biofuels sector, it would be a mistake for the Department to impose narrow and inflexible eligibility rules that could limit progress before there is a clear understanding of what is achievable.

Allowing liquid biofuels to participate in the Renewable Portfolio Standard is particularly important given that liquid biofuels will primarily be used to displace petroleum-based fuel oil in peaker facilities. As the Department is surely aware, a substantial portion of critical peaking generation capacity in Massachusetts lies in petroleum-fired combustion turbines, and is likely to remain so for some time.³ Liquid biofuels can be used as a substitute in these critical peaker facilities and, in so doing, can be used to displace dirty fuels at peak hours when pollution concerns are most acute. Moreover, unlike other major sources of renewable energy, biofuels can be stored and dispatched at times of peak demand, helping to contain rate pressure. As the percentage of electricity that must be generated from renewable resources increases, the capability of biomass energy to play a load-following role will grow in its importance to ratepayers.

For these reasons, New Generation Biofuels requests that – if the Department intends to issue regulations under the Green Communities Act that would limit eligible feedstocks – it do so in a way that not exclude those feedstocks that are customarily used in the production of biodiesel, namely those derived from soybeans, palm, recycled oils, algae, canola (rape seed), corn, and jatropha. To do otherwise would deal a severe blow to an emerging industry that has great capacity to increase the availability of renewable energy and to reduce greenhouse gas emissions.

³ In 2007, Massachusetts ranked higher than all but three states in total electric generation derived from petroleum liquids. *See* http://www.eia.doe.gov/cneaf/electricity/epm/table1_8_b.html.

III. THE DEPARTMENT SHOULD NOT APPLY EMISSIONS LIMITS TO DISCOURAGE CO-FIRING

Current regulations state that, if a facility is co-firing eligible and ineligible fuels, then the “entire Generation Unit” must meet the low-emission eligibility criteria.⁴ Although perhaps intended as a method of lowering pollution levels associated with co-firing facilities, this rule is likely to have the perverse effect of preventing many of the dirtiest fossil fuel units from co-firing at all, thus eliminating a possible source of emissions reductions. For example, New Generation Biofuels would like to market its biofuel to be co-fired with pulverized coal. It is doubtful, however, that any pulverized coal facilities would meet strict emissions criteria, even if they were co-firing biofuels. Thus, the rule requiring that the entire generation unit meet the emissions criteria would produce the unintended consequence of preventing coal facilities from reducing their emissions through co-firing a renewable biofuel.

New Generation Biofuels recommends that, if a biofuel meets the emissions eligibility criteria when fired on a neat basis, that biofuel should also be eligible for co-firing, irrespective of the emissions profile of the ineligible fuel it is co-firing with. Indeed, the dirtier the ineligible fuel, the more pollution may be averted through co-firing.

IV. CONCLUSION

New Generation Biofuels is developing a biofuel technology it believes can produce deeper reductions in CO₂ and other pollutants at lower prices than traditional biofuels. New Generation Biofuels hopes that the Department will enable New Generation Biofuels and other biofuels manufacturers to participate in the Massachusetts RPS by (1) permitting all feedstocks that are customary in the production of biodiesel, (2) allowing generators that satisfy the federal NSPS combustion turbine standards to qualify

⁴ 225 CMR § 14.05(3)(b).



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as “low emission” at least on an interim basis, and (3) refining its regulations to enable co-firing with ineligible fuels.

Thank you for the opportunity to comment on these important issues.

Respectfully submitted,

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